



JOB VACANCIES

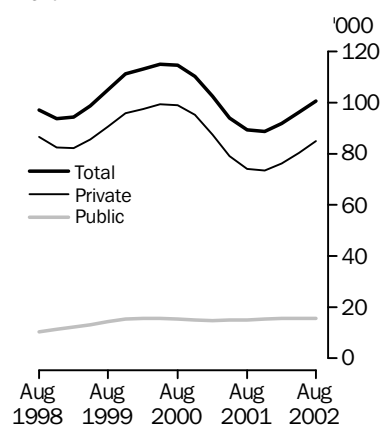
AUSTRALIA

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AUGUST 2002 KEY FIGURES

Job Vacancies

Trend



TREND ESTIMATES

		% change May 2002 to Aug 2002	% change Aug 2001 to Aug 2002
	Aug 2002		
Job vacancies — '000			
Private sector	85.1	5.7	14.5
Public sector	15.7	-0.4	4.2
Private and public sectors	100.8	4.7	12.8

AUGUST 2002 KEY POINTS

TREND ESTIMATES

- Total job vacancies in August 2002 were 100,800, an increase of 4.7% from May 2002.
- The number of private sector job vacancies increased by 5.7% to 85,100 in August 2002.
- The number of job vacancies in the public sector was 15,700 in August 2002, a decrease of 0.4% from May 2002.

NOTE!
Please refer to
Changes in this
Issue on page 2.

- For further information about these and related statistics, contact Colin Fallows on Perth 08 9360 5304 or the National Information and Referral Service on 1300 135 070.

NOTES

FORTHCOMING ISSUES

ISSUE	EXPECTED RELEASE DATE
November 2002	9 January 2003
February 2003	27 March 2003

CHANGES IN THIS ISSUE

This issue presents the first release of estimates from the Job Vacancies Survey compiled using new statistical infrastructure. To maintain continuity of series, revisions have been made to historical data. Refer to the article on page 3 for more details.

Revisions have also been made to May and February 2002 estimates as a result of correcting errors in previously reported data. These revisions affect estimates for the private sector in the Property and business services industry for New South Wales, Victoria, South Australia, Western Australia and the Australian Capital Territory.

SAMPLING ERRORS

In order to spread reporting load, some sampled businesses are removed from the sample each quarter and replaced with similar businesses. This rotation process usually involves about 7% of the units in the survey sample. However, due to the changes described on page 3 of this publication, the rotation rate for the August 2002 survey was approximately 37%. Businesses added to the sample can report differently from those which they replace or are already in the sample. The potential impact of this increased rotation is reflected in the standard errors of movement.

For information on sampling errors see the Technical Notes. Standard errors for the original estimates contained in this publication are in tables A and B of the Technical Notes.

SYMBOLS AND OTHER USAGES

ABN	Australian Business Number
ABS	Australian Bureau of Statistics
ATO	Australian Taxation Office
GE	Group Employer
JVS	Job Vacancies Survey
PAYGW	Pay-as-you-go withholding
TAU	Type of activity unit
*	subject to sampling variability too high for most practical purposes. See paragraph 6 of the Technical Notes

Dennis Trewin
Australian Statistician

INTRODUCTION OF NEW STATISTICAL INFRASTRUCTURE

CHANGES IN THIS ISSUE

As advised in the previous issue, this publication presents the first release of estimates from the Job Vacancies Survey compiled using new statistical infrastructure. Estimates for August 2002 have been compiled on the new basis.

HISTORICAL SERIES

To facilitate comparison over time, the historical series in this release have been revised to make the time series of estimates as continuous as possible. This has been done by estimating the impacts of the infrastructure changes on the statistics, and smoothing this impact back to November 1983. The estimates of the impacts were compiled by combining survey data collected on the old basis in respect of May 2002 with information about the changes. The level estimate for the total Job Vacancies series for May 2002 on the new basis is 4.9% higher than the estimate on the old basis. While there are sampling and non-sampling errors associated with measuring the impacts, it is not possible to quantify them.

NEW INFRASTRUCTURE

The new infrastructure was described in an information paper *Improvements in ABS Economic Statistics [Arising from The New Tax System]* (cat. no. 1372.0), released by the ABS on 6 May 2002. The paper described a number of statistical infrastructure changes designed to allow better use of data available from the taxation system to improve efficiency, coverage and sample design in the compilation of ABS economic series.

Although the new infrastructure will result in longer term benefits for users of economic statistics, the transition to the new basis has added volatility to the movement estimates for May to August 2002. The volatility is primarily a result of significantly increased rotation of the sample which has led to increased standard error of movement. In August, approximately 1,700 units rotated into the sample and 1,500 rotated out. For estimates of movement standard errors for August 2002, refer to Technical Notes table A.

IMPACTS ON MAY TO AUGUST ESTIMATES

Because of the larger than normal movement standard errors, estimates of May to August 2002 movements should be treated with caution. In addition, care should be taken with comparisons that span before and after August 2002. However, estimates for August 2002 onwards will be on a comparable basis, and should produce movements that are as accurate as movement estimates covering periods prior to August 2002.

JOB VACANCIES, States & territories

Reference date	ORIGINAL.....								SEASONALLY ADJUSTED		TREND
	New South Wales	Victoria	Queens-land	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia	Australia	Australia
.....											
('000)											
2001											
May	30.6	23.3	15.5	5.7	6.8	1.7	1.1	2.6	87.4	94.0	94.3
August	29.8	28.1	16.4	6.6	10.3	1.4	1.1	3.3	96.9	89.9	89.4
November	28.9	24.7	14.9	6.6	6.6	* 1.8	0.8	3.0	87.4	88.4	89.0
2002											
February	23.9	28.1	16.8	7.0	8.5	1.5	1.2	4.2	91.3	91.0	91.9
May	31.1	24.9	11.7	7.0	* 9.5	* 1.7	1.1	3.2	90.3	97.2	96.3
August	34.7	29.8	22.1	7.8	8.2	* 2.2	1.5	3.2	109.6	101.5	100.8
.....											
PERCENTAGE CHANGE (from previous quarter)											
2001											
May	-11.1	-19.3	24.9	-13.6	-35.3	-34.9	-10.6	-20.6	-12.6	-5.7	-8.1
August	-2.7	20.7	5.8	14.7	51.5	-17.9	-5.3	26.7	10.9	-4.4	-5.2
November	-2.8	-12.1	-9.5	0.2	-35.4	31.4	-22.6	-10.5	-9.8	-1.7	-0.4
2002											
February	-17.2	13.7	13.1	7.1	28.6	-21.1	43.6	40.4	4.4	2.9	3.3
May	30.0	-11.3	-30.5	-0.4	11.6	15.9	-8.7	-22.2	-1.1	6.8	4.8
August	11.5	19.6	88.8	11.3	-13.9	31.7	39.9	-0.2	21.4	4.4	4.7
.....											
PERCENTAGE CHANGE (from corresponding quarter of previous year)											
2000											
August	-8.7	32.2	3.8	9.8	13.3	54.2	42.5	-8.6	7.3	7.1	9.0
2001											
August	-37.1	-26.1	21.5	17.5	-8.8	-54.5	-39.4	5.2	-21.6	-21.6	-22.1
2002											
August	16.7	6.0	34.3	19.0	-20.2	58.0	41.8	-2.5	13.0	12.9	12.8
.....											

JOB VACANCIES, Private sector, States & territories

ORIGINAL.....										SEASONALLY ADJUSTED	TREND
Reference date	New South Wales	Victoria	Queens- land	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia	Australia	Australia
.....											
('000)											
2001											
May	26.2	20.0	* 13.5	4.9	5.4	1.1	* 0.9	0.8	72.8	78.4	79.3
August	24.8	24.2	14.1	5.8	* 9.1	* 1.1	* 0.8	* 1.2	81.2	74.6	74.3
November	23.9	21.6	12.7	5.8	5.1	* 1.5	* 0.6	* 1.2	72.4	73.6	73.6
2002											
February	18.3	24.1	14.9	6.3	* 6.7	* 1.2	* 1	* 2.6	75.1	75.2	76.3
May	25.3	21.8	9.7	6.2	* 8.1	* 1.4	* 0.9	* 1.4	74.9	80.7	80.5
August	29.6	26.5	19.8	7.0	* 6.8	* 1.9	0.8	1.8	94.2	86.5	85.1
.....											
PERCENTAGE CHANGE (from previous quarter)											
2001											
May	-13.9	-20.0	32.7	-18.0	-39.2	-52.7	-13.7	-56.9	-15.1	-8.7	-9.6
August	-5.4	21.0	4.5	19.1	68.1	-0.4	-5.2	45.0	11.5	-4.8	-6.3
November	-3.5	-10.8	-9.8	-0.7	-43.8	36.9	-31.2	-3.0	-10.8	-1.3	-1.0
2002											
February	-23.4	11.4	17.5	9.1	30.5	-20.6	78.7	116.2	3.8	2.1	3.6
May	37.9	-9.4	-35.0	-1.3	22.5	17.1	-9.2	-45.0	-0.3	7.3	5.6
August	17.2	21.4	104.1	12.7	-17.0	34.4	-12.0	24.9	25.7	7.2	5.7
.....											
PERCENTAGE CHANGE (from corresponding quarter of previous year)											
2000											
August	-8.3	31.5	4.8	15.2	8.2	73.1	39.9	39.3	8.2	8.0	9.3
2001											
August	-42.1	-28.3	23.5	14.0	-3.3	-60.5	-47.7	-20.6	-25.1	-25.2	-25.1
2002											
August	19.5	9.4	40.6	20.5	-25.5	71.0	-1.7	43.9	16.0	15.9	14.5
.....											

JOB VACANCIES, Public sector, States & territories

Reference date	ORIGINAL.....									SEASONALLY ADJUSTED	TREND
	New South Wales	Victoria	Queens- land	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia	Australia	Australia
.....											
('000)											
2001											
May	4.4	3.2	2.0	0.8	1.4	* 0.6	0.3	1.8	14.5	15.6	15.0
August	5.0	3.9	2.3	0.7	1.2	0.3	0.2	2.1	15.8	15.3	15.1
November	5.0	3.1	2.2	0.8	* 1.5	* 0.4	0.3	1.8	15.0	14.8	15.4
2002											
February	* 5.6	4.0	1.9	0.7	1.9	0.3	0.2	1.6	16.1	15.8	15.6
May	* 5.8	3.1	2.0	0.8	1.4	0.3	0.2	1.8	15.4	16.5	15.8
August	5.1	3.3	2.3	0.8	1.4	0.4	0.7	1.5	15.4	15.0	15.7
.....											
PERCENTAGE CHANGE (from previous quarter)											
2001											
May	10.2	-14.8	-10.2	25.0	-13.8	96.6	1.7	33.1	2.1	12.1	0.5
August	13.1	19.3	14.4	-10.9	-13.1	-49.0	-5.6	18.0	8.4	-1.5	0.5
November	0.8	-20.2	-7.4	7.4	27.7	12.0	6.7	-14.9	-5.0	-3.9	2.1
2002											
February	12.0	29.2	-13.1	-7.2	22.5	-23.6	-33.5	-10.6	7.7	6.8	1.3
May	4.1	-22.7	5.2	7.2	-26.7	10.6	-6.1	14.8	-4.8	4.4	1.0
August	-12.8	6.6	14.2	0.4	4.4	19.0	334.8	-19.8	0.3	-8.8	-0.4
.....											
PERCENTAGE CHANGE (from corresponding quarter of previous year)											
2000											
August	-12.1	38.5	-1.3	-26.5	48.3	-20.3	68.5	-31.4	1.5	1.2	7.2
2001											
August	10.2	-7.6	10.8	54.8	-36.3	-3.1	30.2	30.1	3.1	3.0	-2.1
2002											
August	2.5	-15.1	-3.2	7.3	19.8	12.7	190.0	-29.9	-2.3	-2.3	4.2
.....											

	2001.....			2002.....		
	<i>May</i>	<i>August</i>	<i>November</i>	<i>February</i>	<i>May</i>	<i>August</i>
<i>Industry</i>	'000	'000	'000	'000	'000	'000
Mining	1.2	1.1	1.0	1.0	1.1	1.0
Manufacturing	* 9.6	12.9	7.7	7.3	11.6	14.0
Electricity, gas and water supply	0.3	0.3	0.7	0.4	0.4	0.4
Construction	* 4.0	* 5.0	* 6.8	* 9.9	* 9.2	* 5.0
Wholesale trade	* 6.9	* 6.5	* 5.4	* 5.9	4.4	5.5
Retail trade	7.6	16.2	14.8	8.3	10.9	22.9
Accommodation, cafes and restaurants	5.9	5.8	* 5.8	4.5	* 6.3	* 6.9
Transport and storage	1.5	1.0	* 1.6	1.9	2.4	2.0
Communication services	0.7	0.6	0.1	0.2	0.4	0.5
Finance and insurance	5.1	3.2	3.6	2.9	4.0	4.5
Property and business services	16.5	13.2	9.9	16.2	14.2	15.1
Government administration and defence	6.1	6.8	6.0	4.7	5.8	5.5
Education	3.9	* 4.9	3.0	6.5	3.1	5.4
Health and community services	11.2	10.0	12.3	14.2	11.1	13.2
Cultural and recreational services	3.1	3.3	2.9	1.7	1.9	2.5
Personal and other services	* 3.8	* 6.3	* 5.8	* 5.6	* 3.5	* 5.1
All industries	87.4	96.9	87.4	91.3	90.3	109.6

JOB VACANCY RATES, States & territories: **Original**

Reference date	New South Wales	Victoria	Queens-land	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
PER CENT									
2001									
May	1.21	1.09	1.11	1.03	0.90	1.01	1.26	1.51	1.12
August	1.18	1.36	1.18	1.21	1.39	0.83	1.31	1.94	1.26
November	1.15	1.21	1.05	1.19	0.92	1.05	1.00	1.76	1.14
2002									
February	0.95	1.34	1.19	1.17	1.18	0.88	1.48	2.42	1.17
May	1.23	1.19	0.79	1.28	* 1.26	* 1.00	1.24	1.76	1.15
August	1.33	1.45	1.54	1.29	1.08	* 1.38	1.92	1.89	1.39
PERCENTAGE CHANGE (from previous quarter)									
2001									
May	-14.4	-21.1	22.5	-18.8	-37.8	-30.9	-20.9	-23.1	-15.3
August	-2.5	25.2	6.4	17.2	54.9	-17.7	4.1	28.1	12.8
November	-2.7	-11.3	-10.8	-2.1	-33.8	27.2	-23.6	-9.2	-9.9
2002									
February	-17.2	10.5	13.2	-1.5	28.0	-15.9	48.1	37.5	3.1
May	29.6	-11.2	-33.3	9.3	6.2	13.0	-16.4	-27.2	-2.0
August	7.7	22.1	93.7	0.7	-14.2	37.7	54.8	7.4	20.7
PERCENTAGE CHANGE (from corresponding quarter of previous year)									
2000									
August	0.7	33.7	0.8	15.8	22.6	48.9	57.5	-17.7	11.7
2001									
August	-38.3	-25.1	18.4	14.4	-6.3	-53.1	-32.2	4.8	-22.0
2002									
August	12.5	6.2	30.4	6.1	-22.7	66.4	46.5	-2.4	10.0

EXPLANATORY NOTES

INTRODUCTION

1 This publication contains estimates of job vacancies for August 2002 based on information obtained from a sample survey of employers.

SCOPE AND COVERAGE

2 All vacancies (as defined in the Glossary) for wage and salary earners are represented in the Job Vacancies Survey (JVS), except those:

- in the Australian permanent defence forces;
- in businesses primarily engaged in agriculture, forestry and fishing;
- in private households employing staff;
- in overseas embassies, consulates, etc.; and
- located outside Australia.

3 All wage and salary earners who received pay for the reference period are represented in the JVS, except:

- members of the Australian permanent defence forces;
- employees of businesses primarily engaged in agriculture, forestry and fishing;
- employees in private households employing staff;
- employees of overseas embassies, consulates, etc.;
- employees based outside Australia; and
- employees on workers' compensation who are not paid through the payroll.

4 Also excluded are the following persons who are not regarded as employees for the purposes of this survey:

- directors who are not paid a salary;
- proprietors/partners of unincorporated businesses;
- self-employed persons such as subcontractors, owner-drivers, consultants; and
- persons paid solely by commission without a retainer.

5 The sample for the Job Vacancies Survey, like most ABS business surveys, is selected from the ABS Business Register which is primarily based on registrations to the Australian Taxation Office's (ATO) Pay As You Go Withholding (PAYGW) scheme (and prior to 1 June 2000 the Group Employer (GE) scheme). The population is updated quarterly to take account of:

- new businesses;
- businesses which have ceased employing;
- changes in employment levels;
- changes in industry; and
- other general business changes.

The estimates include an allowance for the time it takes newly registered businesses to get on to the survey population.

6 Businesses which have ceased employing are identified when the ATO cancels their PAYGW registration (or previously their GE registration). In addition, from May 1999, businesses which did not remit under the GE scheme for the previous five quarters were removed from the frame. A similar process has been adopted to remove businesses which do not remit under the PAYGW scheme.

EXPLANATORY NOTES

SURVEY DESIGN

7 A sample of approximately 4,600 employers is selected from the ABS Business Register to ensure adequate State and industry representation. The sample is updated each quarter to reflect changes in the ABS Business Register. These changes arise from the emergence of new businesses, takeovers and mergers, changes to industry classification, changes in the number of employees, and businesses which have ceased operations. Such updating of the register can contribute to changes in the estimates of job vacancies.

STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER

8 The ABS uses an economic statistics units model on the ABS Business Register to describe the characteristics of businesses, and the structural relationships between related businesses. The units model is also used to break groups of related businesses into relatively homogeneous components that can provide data to the ABS.

9 In mid 2002, to better use the information available as a result of The New Tax System, the ABS changed its economic statistics units model. The new units model allocates businesses to one of two sub-populations. The vast majority of businesses are in what is called the ATO Maintained Population, while the remaining businesses are in the ABS Maintained Population. Together, these two sub-populations make up the ABS Business Register population.

ATO Maintained Population

10 Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN), and are then included on the ATO Australian Business Register. Most of these businesses have simple structures; therefore the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO Maintained Population, and the ABN unit will be used as the economic statistics unit for all economic collections.

ABS Maintained Population

11 For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS will maintain its own units structure through direct contact with the business. These businesses constitute the ABS Maintained Population. This population consists typically of large, complex and diverse businesses. The new statistical units model described below has been introduced to cover such businesses.

12 Enterprise Group: This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the Corporations Legislation Amendment Act 1991), including legal entities such as companies, trusts, and partnerships. Majority ownership is not required for control to be exercised.

13 Enterprise: The enterprise is an institutional unit comprising (i) a single legal entity or business entity, or (ii) more than one legal entity or business entity within the same Enterprise Group and in the same institutional sub-sector (ie they are all classified to a single Standard Institutional Sector Classification of Australia sub-sector).

14 Type of Activity Unit (TAU): The TAU is comprised of one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items are available, a TAU will be created which covers all the operations within an industry sub-division (and the TAU will be classified to the relevant sub-division of the Australian and New Zealand Standard Industrial Classification). Where a business cannot supply adequate data for each industry, a TAU will be formed which contains activity in more than one industry sub-division.

EXPLANATORY NOTES

ABS Maintained Population <i>continued</i>	<p>15 For more information on the impacts of the introduction of the new economic statistics units model, refer to Information Paper: <i>Improvements in ABS Economic Statistics [Arising from the New Tax System]</i> (cat. no. 1372.0).</p>
COMPARABILITY OF SERIES	<p>16 Job vacancies series in this publication were introduced with the November 1983 issue of the Job Vacancies and Overtime survey publication. Estimates contained in this publication are not strictly comparable with those obtained prior to November 1983.</p> <p>17 Between August and November 1999 a number of improvements were made to operational procedures, in conjunction with the discontinuation of the overtime component of the survey. These improvements resulted in an increase in job vacancy estimates for the private sector. There was negligible change to public sector estimates. Consequently, private sector estimates prior to November 1999 were adjusted to provide a comparable and compatible time series.</p> <p>18 To account for changes described in the article <i>Introduction of New Statistical Infrastructure</i> on page 3 of this publication, the historical series in this release have been revised back to November 1983 to make the time series of estimates as continuous as possible.</p>
SEASONAL ADJUSTMENT	<p>19 Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences can be more clearly recognised. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences which may be present in any particular series. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variation. This means that quarter-to-quarter movements of seasonally adjusted estimates may not be reliable indicators of trend behaviour.</p> <p>20 The series have been seasonally adjusted from February 1984 and the historical series can be made available on request. The seasonal factors are reviewed annually to take account of each additional year's original data. The most recent review, using original estimates to August 2001, took place in time for inclusion in the November 2001 estimates.</p> <p>21 Details about the method of seasonal adjustment of these series are available on request.</p>
TREND ESTIMATES	<p>22 The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the data, and are more suitable than either the seasonally adjusted or original estimates for most business decisions and policy advice.</p> <p>23 The trend estimates in this publication, obtained by dampening out the irregular component from the seasonally adjusted series, are calculated using a centred 7-term Henderson moving average of the seasonally adjusted series. Estimates for the three most recent quarters cannot be calculated using this centred average method; instead an asymmetric average is used. This can lead to revisions in the trend estimates for the last three quarters when data become available for later quarters. Revisions of trend estimates will also occur with revisions to the original data and re-estimation of seasonal adjustment factors.</p>

EXPLANATORY NOTES

TREND ESTIMATES *continued*

24 If a series is highly volatile then the trend estimates will be subject to greater revision for the latest few quarters as new data become available. However, it is important to note that this does not make the trend series inferior to the seasonally adjusted or original series.

25 For more information, see *A Guide to Interpreting Time Series—Monitoring Trends, an Overview* (cat. no. 1348.0); or contact the Assistant Director, Time Series Analysis on Canberra 02 6252 6345 or at <timeseries@abs.gov.au>.

26 Two feature articles which have appeared in the ABS monthly publication *Australian Economic Indicators* (cat. no. 1350.0) may also be of interest:

- Picking Turning Points in the Economy (April 1991); and
- Smarter Data Use (March 1992).

RELATED PUBLICATIONS

27 Users may also wish to refer to the following publications which are available from ABS Bookshops:

- *Information Paper: ABS Statistics and The New Tax System* cat. no. 1358.0—issued 26 April 2000
- *Information Paper: Improvements in ABS Economic Statistics [Arising from The New Tax System]* cat. no. 1372.0—issued 6 May 2002
- *Information Paper: Improvements to Australian Bureau of Statistics Quarterly Business Indicators, 2001* cat. no. 5677.0—issued 6 July 2001
- *Labour Force, Australia* cat. no. 6203.0—issued monthly
- *Average Weekly Earnings, Australia* cat. no. 6302.0—issued quarterly
- *Average Weekly Earnings, Australia 1941–1990* cat. no. 6350.0—issued February 1992
- *Wage Cost Index, Australia* cat. no. 6345.0—issued quarterly
- *Labour Statistics: Concepts, Sources and Methods, 2001* cat. no. 6102.0—issued 6 August 2001
- *Wage and Salary Earners, Public Sector, Australia* cat. no. 6248.0—issued quarterly
- *Employee Earnings and Hours, Australia, Preliminary* cat. no. 6305.0—issued biennially
- *Employee Earnings and Hours, Australia* cat. no. 6306.0—issued biennially.

28 Current publications and other products released by the ABS are listed in the *Catalogue of Publications and Products* (cat. no. 1101.0). The Catalogue is available from any ABS office or the ABS web site <<http://www.abs.gov.au>>. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

ABS DATA AVAILABLE ON REQUEST

29 As well as the statistics included in this and related publications, the ABS may have other relevant data available on request. For contact information, please refer to the Inquiries box on the front page of this publication.

ROUNDING

30 Where figures have been rounded, discrepancies may occur between sums of the component items and totals. Percentages in this publication are calculated using unrounded numbers and consequently could differ from percentages that are calculated from the published rounded statistics.

TECHNICAL NOTES

RELIABILITY OF ESTIMATES

1 As the estimates in this publication are based on information relating to a sample of employers rather than a full enumeration, they are subject to sampling variability. That is, they may differ from the estimates that would have been produced if the information had been obtained from all employers. This difference, called *sampling error*, should not be confused with inaccuracy that may occur because of imperfections in reporting by respondents or in processing by the ABS. Such inaccuracy is referred to as *non-sampling error* and may occur in any enumeration whether it be a full count or sample. Efforts have been made to reduce non-sampling error by careful design of questionnaires, detailed checking of returns and quality control of processing.

2 The sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the *standard error* which indicates the degree to which an estimate may vary from the value which would have been obtained from a full enumeration (the 'true value'). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about 19 chances in 20 that the difference will be less than two standard errors.

3 An example of the use of a standard error on levels is as follows. If the estimated number of job vacancies was 25,000 with a standard error of 2,500, then there would be about two chances in three that a full enumeration would have given an estimate in the range 22,500 to 27,500 and about 19 chances in 20 that it would be in the range 20,000 to 30,000.

4 An example of the use of a standard error for a quarterly change estimate is as follows. If the estimated standard error for a quarterly change estimate of job vacancies was 1,000 and the quarterly change estimate between two quarters was 4,500, then there would be about two chances in three that a full enumeration would have given a quarterly change estimate in the range +3,500 to +5,500 and about 19 chances in 20 that it would be in the range +2,500 to +6,500.

5 Quarterly movements in estimates of job vacancies are considered to be statistically significant where they exceed two standard errors.

6 Another measure of the sampling error is the *relative standard error*, which is obtained by expressing the standard error as a percentage of the estimate. Level estimates with a relative standard error of 25% or more, denoted with an asterisk in this publication, are subject to sampling variability generally considered to be too high for most practical purposes.

A

STANDARD ERRORS, Job vacancies, States & territories

LEVEL.....	QUARTERLY MOVEMENT.....							
	JOB VACANCIES.....				JOB VACANCIES.....			
	JOB VACANCY RATES				JOB VACANCY RATES			
	Total	Private	Public	Total	Total	Private	Public	Total
States & Territories	'000	'000	'000	%	'000	'000	'000	%
New South Wales	4.5	4.5	0.4	0.16	5.5	5.2	1.8	0.21
Victoria	4.1	4.1	0.2	0.19	4.9	4.9	0.2	0.23
Queensland	3.3	3.3	0.2	0.22	3.4	3.4	0.2	0.23
South Australia	1.4	1.4	0.1	0.23	1.6	1.6	0.1	0.27
Western Australia	1.8	1.7	0.4	0.21	3.1	3.0	0.3	0.39
Tasmania	0.6	0.6	0.1	0.35	0.5	0.5	0.1	0.30
Northern Territory	0.2	0.2	0.0	0.25	0.3	0.3	0.0	0.40
Australian Capital Territory	0.4	0.4	0.0	0.25	0.4	0.4	0.1	0.27
Australia	7.3	7.3	0.6	0.09	8.9	8.7	1.8	0.11

B

STANDARD ERRORS, Job vacancies, Industry

Industry	2001.....			2002.....		
	May	August	November	February	May	August
	'000	'000	'000	'000	'000	'000
Mining	0.2	0.1	0.1	0.1	0.3	0.1
Manufacturing	2.3	2.2	1.6	1.1	2.2	3.3
Electricity, gas and water supply	0.0	0.0	0.0	0.0	0.0	0.1
Construction	1.3	1.6	3.0	3.5	3.4	1.9
Wholesale trade	2.2	2.2	2.1	1.6	0.8	1.2
Retail trade	1.4	3.4	2.9	1.7	2.1	3.9
Accommodation, cafes and restaurants	1.5	1.1	1.7	1.0	2.3	2.0
Transport and storage	0.3	0.2	0.5	0.5	0.6	0.4
Communication services	0.0	0.0	0.0	0.0	0.0	0.0
Finance and insurance	0.8	0.3	0.5	0.3	0.6	1.0
Property and business services	3.4	2.9	1.9	2.9	2.9	2.8
Government administration and defence	0.4	0.6	0.6	0.4	0.4	0.4
Education	0.4	1.3	0.4	1.1	0.2	0.8
Health and community services	1.2	1.0	1.4	2.3	1.9	2.4
Cultural and recreational services	0.5	0.6	0.5	0.4	0.4	0.5
Personal and other services	1.6	2.7	2.5	2.4	1.4	1.5
All industries	5.7	6.7	6.4	6.4	6.4	7.3

G L O S S A R Y

Industry	Industry is classified according to the Australian and New Zealand Standard Industrial Classification. For more details refer to the <i>Australian and New Zealand Standard Industrial Classification 1993 (ANZSIC)</i> (cat. no. 1292.0).
Job vacancy	<p>A job vacancy is a job available for immediate filling on the survey reference date and for which recruitment action had been taken. Recruitment action includes efforts to fill vacancies by advertising, by factory notices, by notifying public or private employment agencies or trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation. Excluded are vacancies:</p> <ul style="list-style-type: none"> ▪ for jobs which became vacant on the survey date and were filled that same day; ▪ for jobs of less than one day's duration; ▪ to be filled by persons already hired, or by promotion or transfer of existing employees; ▪ to be filled by employees returning from paid or unpaid leave or after industrial dispute(s); ▪ not available for immediate filling on the survey reference date; ▪ not available within the particular state or territory to which the return relates; ▪ for work to be carried out by contractors; ▪ for which no recruitment action has been taken; ▪ where a person has been appointed but has not yet commenced duty; ▪ to be filled by staff from contract labour agencies; and ▪ for jobs available only to persons already employed by the enterprise or organisation.
Job vacancy rate	The job vacancy rate is calculated by expressing the number of job vacancies as a percentage of the number of employees plus vacancies.
Number of employees	<p>All wage and salary earners who received pay for any part of the relevant pay period. The relevant pay period is the last pay period ending on or before the survey reference date. All permanent, temporary, casual, managerial and executive employees are included. Part-time and casual employees who may have received pay for only a few hours during the reference period are included. Employees on paid leave and those employees on workers' compensation who continue to be paid through the employer's payroll are also included. Casual employees who work on an irregular basis and who were not paid during the relevant pay period, employees on leave without pay, on strike or stood down without pay for the whole of the pay period are excluded.</p>
Reference date	Reference date for the survey is the third Friday of the middle month of the quarter. The reference date for the current survey is 16 August 2002.
Sector	Public sector includes all local government authorities and government departments, agencies and authorities created by, or reporting to the Commonwealth Parliament and state/territory parliaments. All remaining employees are classified as private sector.

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